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10/538,085	06/08/2005	Colin Amor	CUNANT 1612US	1499

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EXAMINER

COZAD, JULIANNE M

ART UNIT	PAPER NUMBER
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3671

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. Claims 1-15 are cancelled as per the request of applicant and will not be examined further.

Claim Objections

2. Claim 19 is objected to because of the following informalities: line 1, "wherein ***that*** attachment means" should be changed to "wherein ***the*** attachment means".
Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Regarding claims 18 (line 2), 19 (line 3), 20 (line 2) and 21 (line 2), the phrase "or like appliance" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 16,17,21 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Straayer '332 as cited by applicant.

With respect to claim 16, Straayer '332 discloses a rotary cultivator comprising:

- An elongate tubular handle 14
- A cultivator tool 40 rotatably mounted at one end of the handle member 14 via cylinder 50
- An electric motor drive unit 12 mounted at the other end of the handle member 12

The handle member 14 being curved adjacent the end to which the cultivator tool 40 is mounted, see Figure 3

- A flexible drive element 17 extending within the tubular handle member 14

The flexible drive element 17 being connected directly at one end to the electric motor drive unit 12 and at the other end to the cultivator tool 40 (Col. 3, lines 5-15)

With respect to claim 17, the electric motor drive unit 12 is provided in the form of a dedicated drive unit secured to the upper end of the handle member, see Figure 3.

With respect to claim 21, the motor 12 is connected to the flexible drive 17 by means of a drive member and socket formation (under lip around 14 connected to the bottom of

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12 in Figure 3) inherently for engagement of the flexible drive because the torque from the motor must inherently be transmitted to the flexible shaft to rotate the cultivator tool.

With respect to claim 28, the cultivator tool 40 is connected to the flexible drive 17 by an arbor (portion between motor 12 and handle 14, the arbor has a socket formation for engagement of a drive formation on the flexible drive and being rotatably mounted in a bush unit secured to the lower end of the handle member 14, see Figure 3, Col. 3, lines 5-15.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 18-21,23,25,26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straayer '332 in view of Lidstone [US 3,129,771].

Straayer '332 discloses the rotary cultivator as disclosed above.

However, Straayer '332 does not specifically disclose a portable drill or the attachment means or the exact structure of the cultivator tool.

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Lidstone '771 discloses a similar rotary cultivator and further discloses a portable drill 6 as indicated in Col. 1, lines 37-40. This portable drill is seen as an obvious design choice to use a portable drill as the electric motor of Straayer '332 because a portable drill is a suitable driving means for a rotary cultivator, as taught by Lidstone '771, ***regarding claim 18.***

With respect to claim 19, Lidstone '771 discloses attachment means 4 is provided at the upper end of the handle member (shank 1) for securing a drill 6 to the handle member 1.

With respect to claim 20, Lidstone '771 discloses means (shaft 5) is provided for clamping the drill to the attachment means 4 which is seen as a design choice since various means of attachment would be beneficial depending on the specific application.

With respect to claim 21, Lidstone '771 discloses an alternate embodiment of a socket (chuck 4) for engagement of the shaft (shank 1) and drive shaft (not shown, but part of drill 6).

With respect to claim 23, Lidstone '771 discloses the electric motor drive unit 6 is powered from a mains supply, see cord in Figure 1.

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With respect to claims 25 and 26, Lidstone '771 discloses the cultivator tool 2,7,8,9,10 comprising a flange formation (crossbars 8) with a plurality of cylindrical tine formations 7 extending in a direction axially from the outer periphery of the flange formation (crossbars 8) at angularly spaced location, see Figures 1,2, to provide for better penetration of the ground and more effective aeration of the soil. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the cultivator tool of Straayer '332 with a tool like that of Lidstone '771 because the tine formation allows for easier penetration of the ground and more effective aeration while breaking up the soil, as taught by Lidstone '771.

With respect to claim 28, Lidstone '771 discloses an alternate embodiment of a socket (unlabelled lip connecting cultivating tool 2,7,8,9,10 to shank 1, see Figures 1-3) rotatably mounted and secured to the lower end of the handle member (shank 1).

9. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straayer '332 as applied to claim 16 above, and further in view of Andrews '318, as cited by applicant.

Straayer '332 discloses the rotary cultivator as disclosed above.

However, Straayer '332 does not specifically disclose the exact structure of the cultivator tool.

Andrews '318 discloses a similar rotary tool which has a blade that could be used for cultivating. This blade comprises a flange formation (26,32a-b) with a plurality of tine formations (26a-b,28a-b,30a-b) extending in a direction of the axis of rotation of the flange formation, see Figures 3,5, **regarding claim 25**. Cylindrical tine formations extending axially from the outer periphery of the flange formation at angularly spaced locations (Col. 5, lines 47-49), Figures 3,5, **regarding claim 26**. Further, the tine formations are angled inwardly away from the flange formation (Col. 5, lines 49-52), Figures 3,5, **regarding claim 27**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the structure of the blade of Andrews '318 into the implement of Straayer '332 because the location and angles of the blade offer different results depending on the specific application, as taught by Andrews '318, Col. 5, lines 29-35,41-55.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Straayer '332 as applied to claim 16 above, and further in view of Alberto [US 3,444,934].

Straayer '332 discloses the rotary cultivator as disclosed above.

However, Straayer '332 is silent of the power means of electric motor 12.

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Alberto '934 discloses a similar rotary, ground-engaging tool that is powered by a drill which is inherently powered by batteries, (Col. 3, lines 6-9, Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to power the motor of Straayer '332 with the battery-operated drill of Alberto '934 as a design alternative to the portable motor of Straayer '332.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Straayer '332 as applied to claim 16 above, and further in view of Troeng et al. [US 2,771,828].

Straayer '332 discloses the rotary cultivator as disclosed above.

However, Straayer '332 is silent on the specifics of the clutch used in the motor 12.

Troeng et al. '828 discloses a similar cultivator and further teaches it is advantageous to use a torque-limiting clutch to minimize damage done to the implement and to allow for easy adjustment of the pressure and force transmitted by the motor, Col. 2, lines 1-11.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a torque-limiting clutch into the implement of Straayer '332 to allow for better control of force and pressure transmitted and to prevent damage to the implement as taught by Troeng et al. '828.

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12. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straayer '332 as applied to claim 16 above, and further in view of Fredrickson [US 5,799,996].

Straayer '332 discloses the rotary cultivator as disclosed above.

However, Straayer '332 does not disclose a handle comprising a plurality of sections.

Fredrickson '996 discloses a tool which can be used as a cultivator (Col. 1, line 49) and further discloses a plurality of sections to allow for adaptability of height for a variety of applications and users and to allow for easier storage, (Col. 1, lines 37,38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the implement of Straayer '332 to include the plurality of sections as taught by Fredrickson '996 to allow for greater adaptability of length to accommodate a variety of applications and users as well as allowing for easier storage, as taught by Fredrickson '996.

With respect to claim 30, Straayer '332 discloses a sleeve member (pipe-like support member 14) to act as a guide and bearings for the flexible drive element 17, see Figures 3,4.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julianne M. Cozad whose telephone number is 571-272-6946. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC
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